SECTION 02370: ENVIRONMENTAL PROTECTION

PART 1 – GENERAL

1.01 DESCRIPTION OF WORK

The Contractor shall perform the work in such a way as to minimize escape of materials and pollution into the surrounding environment. This section outlines specific requirements for controlling erosion, monitoring water quality, and preventing spills of hazardous materials.

The Contractor shall perform monitoring during the remedial action to ensure that worker and public health and safety are protected during construction.

Water quality monitoring will be performed by the Contractor during the construction work to ensure that water quality is protected in Whatcom Creek. Various construction controls will be implemented during the activity, and water quality monitoring will be used to identify the need for additional controls as required.

1.02 SUBMITTALS

For construction activities, the Contractor(s) will be required to submit a Construction Plan and Schedule, for approval by the Engineer and by Ecology. Further information on this submittal is provided in Section 02300 – Earthwork. No physical work is to be performed at the site until the plan is reviewed and specific authorization to start the work is obtained.

The Construction Plan and Schedule will include a section entitled the Environmental Protection Plan. This section of the Construction Plan and Schedule will cover potential environmental degradation as a result of the Contractor(s) operations, and shall include, at a minimum, the following information:

A. Procedures for environmental protection and monitoring, including procedures for emergency spill containment and removal operations.

B. Location of temporary stockpiles and methods of stockpile protection.

C. Description of methods for contamination prevention, closure, cleanup, and erosion and turbidity control.

D. Means of accomplishing excavation and/or backfilling and capping work through the water (only allowed at elevations below +3 feet MLLW), and provisions for minimizing the potential for turbidity losses from such operations.

PART 2 – MATERIALS

The Contractor shall provide spill response materials including, but not limited to, the following: containers, absorbents, shovels, and personal protective equipment (PPE). Spill response materials shall be available at all times in areas where potentially hazardous materials and/or landfill refuse are being excavated, accumulated, handled, or transported.

The Contractor shall provide the miscellaneous equipment and tools necessary to handle hazardous materials in a safe and environmentally sound manner. At a minimum, the Contractor shall provide emergency response equipment to respond to releases, fires, and explosions involving hazardous materials.

PART 3 – EXECUTION

A. Water Quality Monitoring

The Contractor will be responsible for monitoring water quality during excavation and construction activities. The Contractor will obtain and analyze water quality samples to monitor and control, if necessary, short-term water quality impacts from excavation and construction activities, and to invoke corrective actions or modify operations, if necessary, to bring construction activities into compliance with water quality performance criteria.

The Contractor will be responsible for monitoring water quality in the Whatcom Creek estuary during all construction periods and at all representative high and low tide conditions, to ensure that water quality protection is achieved during the implementation of the remedial action. Monitoring stations will be established at locations approximately 200 feet upstream and downstream of the active in-water construction area (final mixing zone boundaries and sampling Plans will be determined by Ecology as part of substantive Water Quality Certification review of the draft final design submittal). At each sampling location, water quality parameters including temperature, salinity, pH, turbidity and dissolved oxygen (DO) will be monitored at a midpoint depth within the water column.

Monitoring equipment will include DO, turbidity, temperature, salinity, and pH probe(s). Equipment will be maintained in good working order and in safe-working conditions at all times. Survey equipment will be maintained and calibrated for the life of the Contract. Any calibration techniques necessary to ensure accuracy of performance will be prescribed in either the CQC Plan (dredging equipment and survey equipment) or the SAP and QAPP Addenda.

In the event that the initial monitoring data reveal a turbidity (or other parameter) release that exceeds applicable water quality standards, the Contractor will be required to modify operations as appropriate to further reduce such releases (e.g., by placing temporary silt fences at the boundary of the excavation area during low tide conditions).

B. Avoidance of In-Water Work

Earthwork (excavation, backfilling, and capping) above elevation +3 feet MLLW shall be done “in the dry,” when water levels are at least one foot below the working surface. Excavation through water will not be allowed, with the only possible exception being cases where the Contractor can demonstrate to the satisfaction of the Engineer that excavation “in the dry” is infeasible, and then will only be accepted for elevations below +3

feet MLLW. The Contractor may elect to place rock and gravel materials through water only below elevation +3 feet MLLW, subject to the approval of the Engineer. Any earthwork done through the water shall be subject to water quality monitoring and possible use of additional BMPs, at the discretion of the City, the Engineer, and Ecology. See Section 02300-Earthwork for further details.

C. Erosion Control/Turbidity Prevention

The Contractor shall control potential turbidity releases from the construction area by using complementary conservation measures (BMPs), such as:

1. Restricting excavation work to times when tide levels are below the working surface
2. Rolling freshly excavated surfaces to a relatively flat and smooth condition
3. Using equipment and techniques that cause minimal disturbance to existing subgrades and creek sediments

Depending on the results of water quality monitoring, additional methods for control of turbidity releases may be required by the City, the Engineer, or Ecology:

1. Placement of an initial lift of capping material on freshly excavated subgrades, prior to subsequent tidal inundation
2. Placing a layer of filter fabric geotextile over freshly placed subgrades, prior to subsequent tidal inundation

D. Control of Other Pollutants

Other pollutants that occur on site during construction shall be handled and disposed of in a manner that does not contaminate stormwater or surface water. Fueling of Contractor's equipment shall be performed away from storm drain inlets. Extreme care shall be taken to prevent fuel spills.

The Contractor shall comply with the Preparedness and Prevention Requirements specified in WAC 173-303-340.

A Contractor's representative shall be present at all times when equipment is being fueled. In the event of a spill, the National Spill Response hotline shall be called at (800) 424-8802 and the Department of Ecology's Southwest Region hotline at (360) 407-6300. Absorbent oil pads and drip pans shall be placed beneath the vehicle being fueled. Absorbent materials, shovels, and appropriate containers shall be provided and maintained for spill cleanup. No vehicle maintenance other that emergency repair shall be performed on the Project site, nor are engine fluids to be stored on the Project site.

E. Misplaced Material

Should the Contractor during execution of the work, lose, dump, throw overboard, sink, or misplace any material, machinery, or appliance into Whatcom Creek, the Contractor shall promptly recover and remove the same regardless of cause. The Contractor shall give immediate verbal notice, followed by written confirmation, of the description and location of such obstructions to the Engineer and shall mark location of such obstructions until they are removed.

F. Stabilized Construction Entrance and Wheel Wash

The Contractor shall install a stabilized construction entrance at a single point of entry and egress from the site. This entrance shall be located along the north side of the Sash and Door property parcel, east of the existing ReStore Building. This stabilized construction entrance shall include a pad of gravel at least one foot thick and a truck wheel wash facility. The Contractor shall be responsible for arranging a water supply for the wheel wash facility and a wash water collection and treatment system.

The Contractor shall remove the stabilized construction entrance and restore its area to original conditions at the end of construction.

PART 4 – MEASUREMENT

Not applicable.

PART 5 – PAYMENT

Payment for providing and maintaining environmental protection, controls, and monitoring shall be paid at the Contract unit price for ENVIRONMENTAL PROTECTION AND MONITORING, payment of which shall constitute full compensation for the activities specified in this section.

END OF SECTION 02370